

WHAT IS CLAIMED IS:

1. A method for optimizing a spectral Doppler display of Doppler ultrasound information comprising:
5 receiving Doppler signal information;
 processing Doppler signal information for display of a spectral Doppler display in a display area; and
 analyzing spectral Doppler signal information to
10 optimize at least one of the spectral Doppler display parameters of velocity range, PRF, baseline position or baseline inversion for display of the processed Doppler signal information in the display area.
- 15 2. The method of Claim 1, wherein the optimized display parameters map the processed Doppler signal information to make more extensive use of the display area.
- 20 3. The method of Claim 1, wherein analyzing spectral Doppler signal information to optimize display parameters occurs substantially continuously during display of the Doppler display being optimized.
- 25 4. The method of Claim 1, further comprising updating the display parameters periodically after a predetermined number of heart cycles.
- 30 5. The method of Claim 1, wherein analyzing spectral Doppler signal information to optimize display parameters occurs in response to modification of a Doppler setting by the user.

6. The method of Claim 1, wherein analyzing further comprises analyzing at least some Doppler signal information which is not used to produce a displayed image.

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7. The method of Claim 1, further comprising: storing a sequence of processed Doppler images in memory; and

10 wherein analyzing comprises analyzing Doppler signal information to produce optimized display parameters for display of the stored Doppler images.

8. The method of Claim 7, wherein analyzing further comprises analyzing Doppler signal information of a plurality of the images stored in memory.

9. A method for optimizing the display of Doppler ultrasound information comprising: receiving Doppler signal information; processing Doppler signal information for display of an anatomical Doppler display in a display area; and

25 analyzing spectral Doppler signal information to optimize at least one of the display parameters of the PRF, the color baseline, the color range polarity, or the range of color pixel values for display of the processed Doppler signal information in the display area.

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10. The method of Claim 9, wherein processing further comprises processing Doppler signal information for display of a colorflow Doppler display in the display area.

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11. The method of Claim 9, wherein processing further comprises processing Doppler signal information for display of a velocity Doppler display in the display area.

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12. The method of Claim 9, wherein processing further comprises processing Doppler signal information for display of a Doppler M-mode display in the display area.

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13. The method of Claim 9, wherein processing further comprises processing Doppler signal information for display of a power Doppler display in the display area.

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14. The method of Claim 9, wherein the optimized display parameters map the processed Doppler signal information to make more extensive use of the range of color or intensity of displayed Doppler information.

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15. The method of Claim 9, wherein analyzing Doppler signal information to produce optimized display parameters occurs substantially continuously during display of the Doppler display being optimized.

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16. The method of Claim 9, further comprising updating the display parameters periodically after a predetermined number of heart cycles.

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17. The method of Claim 9, wherein analyzing Doppler signal information to produce optimized display parameters occurs in response to modification of a Doppler setting by the user.

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18. The method of Claim 9, wherein analyzing
further comprises analyzing at least some Doppler
signal information which is not used to produce a
5 displayed image.

19. The method of Claim 9, further comprising:
storing a sequence of processed Doppler images
in memory; and
10 wherein analyzing comprises analyzing Doppler
signal information to produce optimized display
parameters for display of the stored Doppler images.

20. The method of Claim 19, wherein analyzing
15 further comprises analyzing Doppler signal
information of a plurality of the images stored in
memory.

21. A method for optimizing the display of
20 Doppler ultrasound information comprising:
receiving Doppler signal information;
processing Doppler signal information for
display of an anatomical Doppler display in a display
area; and
25 analyzing Doppler M-mode signal information to
produce optimized display parameters for display of
the processed Doppler signal information in an
anatomical Doppler display in the display area.

30 22. The method of Claim 21, wherein analyzing
further comprises analyzing Doppler M-mode signal
information to optimize at least one of the
parameters of the PRF, the range of color pixel
values, the color baseline position, and the color
35 range polarity.

23. The method of Claim 22, wherein processing
further comprises processing Doppler signal
information for display of a colorflow Doppler
5 display in the display area.

24. The method of Claim 22, wherein processing
further comprises processing Doppler signal
information for display of a power Doppler display in
10 the display area.

25. The method of Claim 22, wherein processing
further comprises processing Doppler signal
information for display of a Doppler M-mode display
15 in the display area.

26. The method of Claim 22, wherein the
optimized display parameters act to reduce aliasing
in the displayed image.
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27. The method of Claim 21, wherein analyzing
Doppler signal information to produce optimized
display parameters occurs substantially continuously
during display of the Doppler display being
25 optimized.

28. The method of Claim 21, further comprising
updating the display parameters periodically after a
predetermined number of heart cycles.
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29. The method of Claim 21, wherein analyzing
Doppler signal information to produce optimized
display parameters occurs in response to modification
of a Doppler setting by the user.
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30. The method of Claim 21, wherein analyzing further comprises analyzing at least some Doppler signal information which is not used to produce a displayed image.

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31. The method of Claim 21, further comprising: storing a sequence of processed Doppler images in memory; and

10 wherein analyzing comprises analyzing Doppler signal information to produce optimized display parameters for display of the stored Doppler images.

32. The method of Claim 31, wherein analyzing further comprises analyzing Doppler signal
15 information of a plurality of the images stored in memory.

33. A method for optimizing the display of Doppler ultrasound information comprising:
20 receiving Doppler signal information;
processing Doppler signal information for display in a display area; and
analyzing a trace of peak spectral Doppler
information to produce optimized display parameters
25 for display of the processed Doppler signal information in the display area.